CLAIMS

1. An isolated nucleic acid comprising a promoter having a sequence of SEQ ID NO:1, wherein the promoter has stem-specific promoter activity.

2. An isolated nucleic acid comprising a promoter having a sequence at least 65% homologous with SEQ. ID. NO. 1, wherein the promoter has stem-specific promoter activity.

3. An isolated nucleic acid comprising a JAS promoter and an exogenous nucleic acid, wherein the JAS promoter is operable to drive stem-specific expression or transcription of the exogenous nucleic acid.

4. The nucleic acid of Claim 3, wherein the JAS promoter is further operable to drive upregulated stem-specific expression or transcription in the present of a defense-inducing agent.

5. An expression vector comprising, in a in a 5′ to 3′ direction:

a JAS promoter;

an exogenous nucleic acid; and

a 3′ termination sequence.

6. The expression vector of Claim 5, wherein the exogenous nucleic acid comprises a transgene.

7. A plant cell comprising an expression vector having:

a JAS promoter;

an exogenous nucleic acid; and

a 3′ termination sequence.

8. The plant cell of Claim 7, wherein the exogenous nucleic acid comprises a transgene.

9. The plant cell of Claim 7, wherein the exogenous nucleic acid alters carbon metabolism in the plant cell when expressed or transcribed.

10. The plant cell of Claim 7, wherein the exogenous nucleic acid encodes an insecticide effective against at least one stem-boring insect.

11. A plant comprising an expression vector having:

a JAS promoter;

an exogenous nucleic acid; and

a 3′ termination sequence,

wherein expression of the exogenous nucleic acid is stem-specific .

12. The plant of Claim 11, wherein expression of the exogenous nucleic acid is upregulated by the presence of a defense-inducing agent.

13. The plant of Claim 11, wherein the exogenous nucleic acid alters carbon metabolism in the plant cell when expressed or transcribed.

14. The plant of Claim 11, wherein the exogenous nucleic acid encodes an insecticide effective against at least one stem-boring insect.

15. The plant of Claim 11, wherein the plant is a monocot.

16. The plant of Claim 11, wherein the plant is selected from the group consisting of: sugarcane, sorghum, rice, maize and any hybrids thereof.

17. A bacterial cell comprising an expression vector having:

a JAS promoter;

an exogenous nucleic acid; and

a 3′ termination sequence.

18. A method of directing stem-specific expression of a nucleic acid in a plant comprising:

providing an expression nucleic acid having a JAS promoter, an exogenous nucleic acid and a 3′ termination sequence; and

transforming a plant with the expression nucleic acid;

wherein expression of the exogenous nucleic acid is stem-specific.

19. The method of Claim 18, further comprising providing the expression nucleic acid in an expression vector.

20. The method of Claim 18, wherein transforming further comprises gene gun/biolistic-mediated transformation.

21. The method of Claim 18, wherein transforming further comprises *Agrobacterium*-mediated transformation.

22. The method of Claim 18, further comprising transforming an embryonic callus.

23. The method of Claim 22, further comprising regenerating a plant from the embryonic callus.

24. The method of Claim 18, further comprising transforming a plant cell.

25. The method of Claim 18, further comprising breeding progeny of the transformed plant.

26. A method of directing stem-specific expression of a nucleic acid in a plant comprising:

providing an expression nucleic acid having an OMT promoter, an exogenous nucleic acid and a 3′ termination sequence; and

transforming a plant with the expression nucleic acid;

wherein expression of the exogenous nucleic acid is induced by a defense-inducing agent.

27. The method of Claim 26, further comprising providing the expression nucleic acid in an expression vector.

28. The method of Claim 26, wherein transforming further comprises gene gun/biolistic-mediated transformation.

29. The method of Claim 26, wherein transforming further comprises *Agrobacterium*-mediated transformation.

30. The method of Claim 26, further comprising transforming an embryonic callus.

31. The method of Claim 30, further comprising regenerating a plant from the embryonic callus.

32. The method of Claim 26, further comprising transforming a plant cell.

33. The method of Claim 26, further comprising breeding progeny of the transformed plant.

34. A method of isolating a tissue-specific promoter in a polyploid monocot comprising:

isolating total RNA from a first tissue on a polyploid monocot;

preparing ds cDNA from the total RNA from the first tissue;

preparing a microarray of this cDNA;

preparing a first pool of cDNA probes from total RNA from the first tissue;

preparing a second pool of cDNA probes from total RNA from a second tissue;

probing the microarray with the first and second pools of microarray probes;

selecting cDNA that exhibits high levels of hybridization with the first pool of probes as compared to the second pool of probes, wherein this cDNA is tissue-specific for the first tissue and not the second tissue.

35. The method of Claim 34, further comprising:

inserting the ds cDNA in multiple clones to form a cDNA library;

probing the cDNA library with at least one probe specific to the first tissue and at least one probe specific to the second tissue;

picking clones that exhibit higher levels of hybridization to the probe specific to the first tissue and than to the probe specific to the second tissue; and

preparing a microarray of cDNA from the picked clones.

36. The method of Claim 34, further comprising:

screening a genomic library to identify at least one gene corresponding with at least one selected cDNA; and

isolating promoter regions of this gene.